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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/678,461

10/03/2003

Michael John Gidley

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07/10/2007

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EXAMINER

STULII, VERA

ART UNIT

PAPER NUMBER

1761

MAIL DATE

DELIVERY MODE

07/10/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/678,461

Applicant(s)

GIDLEY ET AL.

Examiner

Vera Stulii

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-5,13 and 14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-5, and 13-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 19, 2007 has been entered.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 3-5, and 13-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is rendered indefinite for the recitation of the phrase "wherein the under-cooling step, is such that the surface and core of the fruits have a temperature difference of less than 1.5 C" (lines 8-9). It is not clear whether the temperature difference is maintained during the under-cooling step, or the temperature difference is a result of the under-cooling step, or there is some other interpretation.

Claim 1 is also rendered indefinite for the recitation of the phrase "wherein the under-cooling step, is such that ... more than 50% by number of a sample of 1 cm cubes of the frozen fruit have a fracture force of less than 0.01kN measured in the

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frozen state" (lines 8-11): It is not clear whether fracture force limitation is related to step ii) of under-cooling or to step iii) producing fruits in a frozen state.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 3-5, and 13-14 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-5 of U.S. Patent No. 7169426. Since blanching is a well known step of vegetable pre-freezing treatment, it would have been obvious to omit blanching step in fruit freezing process.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

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Claims 1, 3-5, and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamane et al (EP 0,815,746) in view of Desrosier et al (FUNDAMANTALS OF FOOD FREEZING).

Yamane et al disclose the method of manufacturing fruit by cooling fruit below the freezing point (p. 3 lines 30-34). Yamane et al disclose rapidly cooling fruit from room temperature to a temperature that is close to a freezing point (0°C), and then slower cooling to a temperature that is below freezing point (p. 3 lines 45-47). Yamane et al also disclose that the slow cooling can be combined with a rapid freezing treatment, in which the food is frozen at -18°C or lower, for example, from supercooled state below the freezing point [0041]. Yamane et al also disclose freezing points and regions below the freezing point from -1°C to -18°C [0031]. Thus Yamane et al discloses a process for production of frozen fruits comprising the steps of cooling fruits to 0°C (temperature that is close to a freezing point), under-cooling fruits from 0°C to a temperature up to -18°C , and then reducing the temperature further to produce the fruit in a frozen state. Yamane et al disclose a cooling rate range of 0.01 - $0.5^{\circ}\text{C}/\text{hour}$ (Abstract). Yamane et al also disclose freezing points of fruits from -0.9°C to -2.4°C and regions below the freezing point from -1°C to -18°C [0031]. Yamane et al disclose the following fruits: persimmon, apple, lemon, cherry, asian pear, strawberry, fig, peach, blueberry, apricot [0031].

Yamane et al do not disclose recited cooling range, temperature difference between the core and the surface of fruit, and a particular fracture force.

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Desrosier et al disclose that "great advances have been made in the techniques for freezing fruit rapidly. The present individually quick-frozen (IQF) and cryogenic frozen fruits are superior in quality and stand up better upon thawing than the fruits frozen slowly in packages, cartons or bulk containers" (p. 48). As evidenced by Jay (MODERN FOOD MICROBIOLOGY) "quick or fast freezing is the process by which the temperature of foods is lowered to about -20°C within 30 minutes", and "slow freezing refers to the process whereby the desired temperature is achieved within 3-72 hours" (p.325).

Since Yamane et al discloses cooling and freezing fruits at a slow freezing/cooling rate, and Desrosier et al discloses advantages of quick cooling/freezing techniques, it would have been obvious to modify disclosure of Yamane et al and to increase cooling rates. One of the ordinary skill in the art would have been motivated to do so in order to obtain superior in quality product as taught by Desrosier et al. It is noted that such cooling rate is in the claimed range as evidenced by Jay. As evidenced by Francis et al (Wiley Encyclopedia of Food Science and Technology) "[t]he freezing rate may be evaluated by the speed of movement of the ice (in centimeters per hour) through a product. This speed is faster near the surface and slower toward the center" (p. 1117). Thus employing method steps as taught by Yamane et al and cooling rate as taught by Desrosier et al. for the reasons stated above, would inherently lead to a temperature difference between the surface and core and fracture force as a measurement of mechanical properties of food in relation to texture as claimed.

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Response to Arguments

Applicant's arguments with respect to claims 1, 3-5, and 13-14 have been considered but are moot in view of the new ground(s) of rejection.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vera Stulii whose telephone number is (571) 272-3221. The examiner can normally be reached on 7:00 am-3:30 pm, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on (571) 272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Vera Stulii



**KEITH HENDRICKS
PRIMARY EXAMINER**